shells collected by Mr. Nelson, not previously detected, added to those before credited to the islands, makes a total of 93, or *three-sevenths* of the *animal* forms constituting the *Fauna* of the group, thus far reported.

It is not unlikely that insect species were collected by Grayson and Forrer and have been described and perhaps published somewhere. Only the mollusks collected by Mr. Fisher came under my notice. ROBT. E. C. STEARNS.

Los Angeles, Cal., May 11, 1899.

NEW AMNICOLIDAE FROM FLORIDA.

BY H. A. PILSBRY.

During the past decade a number of undescribed species of this family have accumulated in our collections, chiefly gathered by Mr. C. W. Johnson, Prof. C. E. Beecher and the author.

Amnicola sanctijohannis n. sp.

Shell slightly rimate, ovate-turbinate, corneous, somewhat translucent, rather thin. Surface glossy, the growth-lines hardly visible. Spire rather high, conic, the apex rather obtuse. Whorls $4\frac{1}{2}$, rather convex, separated by a moderately impressed suture which is margined below by a conspicuous transparent border (not visible, of course, in opaque dead or incrusted shells.) Aperture ovate, angular above, a little flattened on the parietal side; peristome a trifle expanded and blackish in fully adult shells, acute, continuous, the parietal wall adnate but with distinct edge, often somewhat calloused within. Alt. 3.4, diam. 2.4 mm.; greatest axis of aperture 1.7 mm.; another specimen measures 3.2, 2.5, 1.7 mm. St. John's river, Florida, at Astor, Lake Co., (type locality), and Silver Spring Run, Marion Co., (Pilsbry & Johnson); Wekiva river (C. E. Beecher.)

This is a larger species than *A. floridana* Ffld., and differs in being imperforate, translucent waxen-whitish when taken alive, and in showing a distinct sub-sutural margin like "*Hydrobia*" *monroensis*. The aperture is distinctly angular above, not rounded as in adult *A. floridana*.

The type series was collected by C. W. Johnson and H. A. Pilsbry, in 1894. Mr. Beecher's specimens from Wekiva river are thinner and bear a delicate ferrous incrustation.

Amnicola Johnsoni, n. sp.

Shell umbilicate, globose, rather thin, pale brown, somewhat transparent. Surface nearly smooth, showing faint growth-striæ. Spire short, obtuse. Whorls $3\frac{1}{2}$, the first convex, planorboid above, the rest very convex, somewhat flattened and strongly "shouldered" below the sutures. Convex at periphery and around the circular umbilicus. Aperture large, oblique, oval, somewhat angular above; peristome thin, the outer and basal margins unexpanded, columellar margin expanded above, not continuous across the parietal wall, which is merely varnished by a light deposit, and is about half the length of the free columellar lip. Alt. 2.7, diam. 2.56, longest axis of aperture 1.7 mm. Operculum Amnicoloid.

St. Augustine, Florida (C. W. Johnson).

The conspicuously obtuse apex and globose contour are unlike any other Floridian species, and somewhat similar to the much larger, more solid and opaque northern *porata* form of *Amnicola limosa* (Say). It is named after Mr. Charles W. Johnson, who collected the series of some forty specimens in the collection of the Academy.

Lyogyrus Dalli Pils. & Beech. is similar to the present species in contour, but is smaller, paler, and differs generically in the closely coiled operculum. *L. granum* (Say) has a decidedly more conical and produced spire, rounder whorls, and, of course, differs in the operculum.

Paludestrina monas, n. sp.

Shell turbinate-conic, rimate-perforate, thin, pale brownish horn-colored; smooth. Whorls 4, very convex, especially below the deeply impressed suture, the apex obtuse. Aperture vertical, oval, slightly narrowed at the upper extremity, the inner margin slightly less orcuate than the outer; peristome thin, the outer margin gently expanded, a little sinuous, being produced forward below. Alt. 1.8, diam. 1.3 mm.

Wekiva river, Florida, with *Lyogyrus Dalli* and *Amnicola sanctijohannis* (C. E. Beecher, February, 1886).

In contour this species resembles *Bythinella Aldrichi* on a small scale. The sinuation of the outer lip is somewhat like that of *Pleurocera*, though much less pronounced. Something similar is found in *B. Hemphilli*.

The following species of this family are now known to us from Florida:

Paludestrina (formerly *Bythinella*) *aequicostata* (Pilsbry).
" " " *Nicklíniana* var. *attenuata* (Hald.).
" " " *brevissima* (Pilsbry).
" *monas* Pils.
Littoridina (?) *monroensis* (Ffld.). Described as *Hydrobia*.
Amnicola sanctijohannis Pils.
" *floridana* Ffld.
" *johnsoni* Pils.
Lyogyrus Dalli P. & B.
Gillia (?) *wetherbyi* (Dall). Described as *Hydrobia*.

We will be glad to hear of any other species from the State. The above-named forms are all from the St. Johns and Wekiva rivers and St. Augustine, and their occurrence elsewhere will be of interest to learn. Probably additional species will reward search in other streams.

They may be collected with a fine-meshed wire scoop, or by gathering a mass of aquatic vegetation, drying it in the air, and then shaking over a paper. This method has been very successfully practiced by Mr. C. E. Beecher in the Wekiva river.

In some places *Amnicolidæ* are incredibly numerous in lake beds. The floor of Lake George, on the St. Johns, is covered in some parts with mud charged with *Paludestrina æquicostata*, and the same species has been found on the bottom of Lake Okeechobee.

NEW SOUTHERN UNIOS.

BY BERLIN H. WRIGHT.

U. rotulatus, sp. nov.

Shell black, smooth anteriorly and over the umbos and with elevated growth-lines over the remainder of the surface, circular, inflated, rayless; umbonal ridge wanting, but replaced by two slightly raised, diverging curved folds; beaks retuse, blunt and broad; substance of the shell rather thick and uniform; beak cavity very deep, wide, sharply angular and with no visible cicatrices; anterior cicatrices distinct, remarkably deep and rough; posterior cicatrices confluent, smooth and slightly impressed; cardinal teeth low, very much notched, inclined to be double in the left and single in the right valve; lateral teeth long, slightly curved, not prominent, and gradu-